Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) An integration server system comprising:

a processor operable to execute instructions stored in a data storage medium;

a database operable to store data accessible to the processor;

a database schema configured to store a set of data object instances in the database;

a metadata model representing a configuration of the set of data object instances in the database schema;

a model application programming interface operable to provide a client application with access to the set of data object instances as separate data objects; and

a metadata application programming interface adapted to provide a client application with access to definitions for the set of data object directly within the database schema instances via the metadata model,

wherein the database schema utilizes an ordered sequence for preserving an ordered association between the set of data object instances, a random sequence value being generated for a new data object instance to be inserted into the ordered sequence, the random sequence value being generated relative to at least one adjacent sequence value for an existing data object instance in the ordered association, the generation of a random sequence value enabling the client application and any additional application able to concurrently insert data object instances into the ordered sequence.

2. (Previously Presented) The integration server system of claim 1, wherein the database schema includes a table having a plurality of rows and columns adapted to store the set of data object instances; and

the metadata model includes a representation of the table.

3. (Previously Presented) The integration server system of claim 1, wherein the model application programming interface is adapted to access the set of data object instances via the metadata application programming interface.

4. (Canceled)

5. (Previously Presented) The integration server system of claim 1, wherein the random sequence value has a floating point value.

6. (Previously Presented) The integration server system of claim 1, wherein the database schema is adapted to alternately store an instance of a string-valued attribute of the set of data object instances in a first data-type or a second data-type in response to the length of the instance of the string-valued attribute.

7. (Previously Presented) The integration server system of claim 6, wherein the first data-type is a fixed-length data structure having a predetermined size and adapted to store the instance of the string-valued attribute in response to the instance of the string-valued attribute having a length less than the predetermined size, and wherein the second data-type is a variable length data structure adapted to store the instance of the string-valued attribute in response to the instance of the string-valued attribute having a length greater than the predetermined size.

8. (Previously Presented) The integration server system of claim 7, wherein the model application programming interface is adapted to receive the instance of the string-valued attribute from a client program, to determine the length of the instance of the string-valued attribute, and to direct the instance of the string-valued attribute to either the first data-type or the second data-type in response to the length of the instance of the string-valued attribute.

9. (Previously Presented) The integration server system of claim 8, wherein the first data-type is associated with a first column of a table of the database schema, and the second data-type is associated with a second column of the table of the database schema.

10. (Previously Presented) The integration server system of claim 1, wherein the database schema includes a database constraint adapted to ensure that the set of data object instances include a set of valid attribute values.

11. (Previously Presented) The integration server system of claim 10, wherein the database schema includes a class type attribute identifying each of the set of data object instances as a member of at least one of a plurality of classes.

12. (Previously Presented) The integration server system of claim 11, wherein the database constraint is conditioned on the value of the class type attribute.

13. (Previously Presented) The integration server system of claim 10, wherein the database constraint is a "not null" constraint.

14. (Previously Presented) The integration server system of claim 10, wherein the database constraint is an "arc" constraint.

15. (Previously Presented) The integration server system of claim 1, wherein the model application programming interface includes an association balance method adapted to balance an association attribute of the set of data object instances.

16. (Previously Presented) The integration server system of claim 1, further including a generator adapted to create the database schema in response to a model description.

17. (Previously Presented) The integration server system of claim 16, wherein the model description defines a data object hierarchy using the unified modeling language.

18. (Previously Presented) The integration server system of claim 16, wherein the generator creates an instance of a data object in the database schema.

19. (Previously Presented) The integration server system of claim 16, wherein the generator creates a database constraint adapted to ensure that the set of data object instances include a set of valid attribute values.

20. (Previously Presented) The integration server system of claim 16, wherein the generator creates a fixed-length data structure having a predetermined size and a variable length data structure adapted to alternately store an instance of a string-valued attribute.

Claims 21-24. (Canceled)

25. (Previously Presented) The integration server of claim 1, wherein the client application is able to create and update data objects by modifying metadata for the set of object instances without accessing the data object instances through the model application programming interface.

26. (Previously Presented) An integration server system, comprising:

a processor operable to execute instructions stored in a data storage medium;

a database operable to store data accessible to the processor;

a database schema configured to store a set of data object instances in the database;

a metadata model representing a configuration of the set of data object instances in the database schema;

a model application programming interface operable to provide a client application with access to the set of data object instances as separate data objects, whereby the client application is able to access data for use in executing a process for the client application; and a metadata application programming interface adapted to provide a client application with access to definitions for the set of data object directly within the database schema instances via the metadata model, whereby the client is able to create and update data objects by modifying metadata for the set of object instances without accessing the data object instances through the model application programming interface,

wherein the database schema utilizes an ordered sequence for preserving an ordered association between the set of data object instances, a random sequence value being generated for a new data object instance to be inserted into the ordered sequence, the random sequence value being generated relative to at least one adjacent sequence value for an existing data object instance in the ordered association, the generation of a random sequence value enabling the client application and any additional application able to concurrently insert ~~a~~ data object instances into the ordered sequence.